

Appl. No. : **10/086,941**
Filed : **February 26, 2002**

REMARKS

This amendment is in response to the Office Action mailed March 25, 2005. Applicants would like to thank the Examiner for the personal interview conducted on June 28, 2005. Claims 1-50 and 67-108 are withdrawn. Accordingly, Claims 51-66 are currently under examination.

Claims 51 and 59 have been amended. Support for the amendment to Claims 51 and 59 can be found throughout the specification. For example, support can be found page 56, line 23 to page 57, line 4. Specifically, the specification at page 56, lines 23-24 states that "heat treatment can be used to selectively remove non-covalently bound probes from a solid phase." The remainder of the paragraph describes heat-treating conditions and heat-treating as applied to beads used in dual bead assays. The next paragraph, however, which begins at page 56, line 32 and ends at page 57, line 4, explains that, in addition to beads, heat-treating can be applied to biodisc solid phases. Heat-treating is also described in Example 3 at page 65, lines 5-15. No new matter has been added by this amendment.

Regarding the Priority Information

In a preliminary amendment dated July 5, 2002, the specification was amended to add priority to U.S. Application Serial No. 09/997,741. A corrected filing receipt was requested on the same day. In response, the USPTO responded that continuity claimed under 35 U.S.C. 120 must supply the relationship between the two applications, either in an application data sheet or in an amendment to the first page of the specification. Accordingly, an ADS was filed on August 24, 2005 to clarify that the instant application is a continuation-in-part of U.S. Pat. App. No. 09/997,741.

Regarding the Deficient Declaration

The Examiner asserts that the declaration is defective because the inventor, KaYuen Yeung, changed "his" address without his initial. The Examiner further stated that a new declaration, in compliance with 37 CFR 1.67(a) is required. A new declaration was sent to the inventor for signing. However, a signed declaration has not been returned to us. Accordingly, a Petition Under 37 C.F.R. § 1.183 Requesting Waiver of 37 C.F.R. § 1.167 and a supporting

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Declaration by Jerry L. Hefner have been filed. A copy of each of these documents is enclosed herewith for the Examiner's convenience.

Discussion of Rejection Under 35 U.S.C. § 102(e)

The Examiner rejects claims 51-66 under 35 U.S.C. § 102(e) as being anticipated by Phan et al., (US 2003/0003464 A1; which is U.S. Application Serial No. 09/997,741). The Examiner asserts that Phan et al teach an optical bio-disc comprising a substrate having encoded information which is readable by a disc drive assembly to control rotation of the disc, a target zone associated with the substrate, and an active layer associated with the target zone.

Claim 51 has been amended to recite the phrases "heat-treated active layer" and "wherein non-covalently bound capture agents are selectively removed." Dependent claim 59 has also been amended to add the phrase "heat-treated." Claims 52-66 depend from claim 51. Phan et al does not disclose a "heat-treated active layer" and further "wherein non-covalently bound capture agents are selectively removed." Thus, Applicants respectfully submit that Phan et al does not disclose all of the limitations of any of claims 51-66, as now amended. Accordingly, Applicants request the withdrawal of the rejection of claims 51-66 under 35 U.S.C. § 102(e)

Additionally, the Examiner rejects claims 51, 52, 58, and 61-66 under 35 U.S.C. § 102(e) as being anticipated by Virtanen (U.S. Patent No. 6,342,349 B1). The Examiner asserts that Virtanen teaches an optical bio-disc comprising a substrate having associated encoded information which is readable by a disc drive assembly to control rotation of the disc, a target zone, an active layer, and a plurality of capture agents attached to the active layer so that when the substrate is rotated, the capture agents remain attached to the active layer to maintain a number of capture agents within the target zone.

Applicants assert that Claim 51, as now amended to recite the terms "heat-treated active layer" and the limitation "wherein non-covalently bound capture agents are selectively removed" is not anticipated by the cited reference. Virtanen does not disclose a "heat-treated active layer" and "wherein non-covalently bound capture agents are selectively removed." Thus, Applicants respectfully submit that Virtanen does not disclose all of the limitations of any of claims 51, 52, 58, and 61-66, as now amended. Accordingly, Applicants respectfully request the withdrawal of the rejection of claims 51, 52, 58, and 61-66 under 35 U.S.C. § 102(e)

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Discussion of Rejection Under 35 U.S.C. § 102(b)

The Examiner rejects claims 51, 52, 58, and 61-66 under 35 U.S.C. § 102(b) as being anticipated by Virtanen (WO 00/05582). The Examiner asserts that Virtanen teaches an optical bio-disc comprising a substrate having encoded information which is readable by a disc drive assembly to control rotation of the disc a target zone, an active layer, and a plurality of capture agents attached to the active layer, so that when the substrate is rotated, the capture agents remain attached to the active layer to maintain a number of capture agents within the target zone.

Applicants assert that Claim 51, and dependent claims 52, 58, and 61-66, as now amended to recite the phrase “heat-treated active layer” and “wherein non-covalently bound capture agents are selectively removed” are not anticipated by the cited reference. Virtanen does not disclose a “heat-treated active layer” and “wherein non-covalently bound capture agents are selectively removed.” Thus, Applicants respectfully submit that Virtanen does not disclose all of the limitations of any of claims 51, 52, 58, and 61-66, as now amended. Accordingly, Applicants respectfully request the withdrawal of the rejection of claims 51, 52, 58, and 61-66 under 35 U.S.C. § 102(b)

Discussion of Rejection Under 35 U.S.C. § 103

The Examiner rejects claim 53 under 35 U.S.C. § 103(a) as being unpatentable over Virtanen (1998 or 2000) as applied to claims 51, 52, 58, and 61-66, and further in view of Ward et al. (U.S. Pat. No. 5,354,655). The Examiner asserts that Virtanen teaches the elements of the claimed invention except that the capture agent is a double stranded oligonucleotide sequence. The Examiner further asserts that Ward et al discloses that a double stranded oligonucleotide sequence on a support hybridizes to a complementary probe after denaturation.

Claim 53 is dependent from claim 51, which has been amended to recite the phrase “heat-treated active layer” and “wherein non-covalently bound capture agents are selectively removed” are not anticipated by the combination of cited references. Applicants respectfully submit that Virtanen in view of Ward, does not disclose all of the limitations of claim 53. Accordingly, Applicants respectfully request the withdrawal of the rejection of claim 53 under 35 U.S.C. § 103(a).

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Applicants respectfully request the withdrawal of the rejection of claim 53 under 35 U.S.C. § 103(a).

Additionally, the Examiner rejects claims 59 and 60 under 35 U.S.C. § 103(a) as being unpatentable over Virtanen (1998 or 2000) as applied to claims 51, 52, 58, and 61-66, and further in view of Cohen et al. (U.S. 2002/0196435 A1). The Examiner asserts that Virtanen teaches the elements of the claimed invention except that the active layer is formed from a polystyrene-co-maleic anhydride and that the amino group chemically reacts with the maleic anhydride to form a covalent bond, thereby maintaining the capture agents within the target zone. However, the Examiner asserts that Cohen et al teach a capture layer in an optical disk that is formed by a polystyrene-co-maleic anhydride. Thus, the Examiner asserts, it would have been *prima facie* obvious for one of skill in the art to make an optical bio-disc as recited in claims 59 and 60.

Claims 59 and 60 depend from independent claim 51, which has been amended to recite the phrase "heat-treated active layer" and "wherein non-covalently bound capture agents are selectively removed." Further, claim 59 has been amended to cite that the active layer is "heat-treated." Applicants respectfully submit that neither Virtanen nor Cohen et al disclose a "heat-treated active layer" and "wherein non-covalently bound capture agents are selectively removed." Thus, Virtanen in view of Cohen, does not disclose all of the limitations of claims 59 or 60. Accordingly, Applicants respectfully request withdrawal of all rejections under 35 U.S.C. § 103, and allowance of the pending application.

CONCLUSION

Applicant respectfully asserts that the above-captioned application, in which Claims 51-66 remain pending, is fully in condition for allowance. The Applicants urge the Examiner to contact the undersigned if any questions remain as to the above-captioned application.

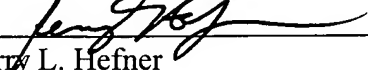
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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11 1410.

Respectfully submitted,

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Dated: August 25, 2005

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